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**Alivisatos et al.**(10) **Pub. No.: US 2008/0226934 A1**(43) **Pub. Date: Sep. 18, 2008**(54) **NANOREACTORS AND METHOD OF MAKING**(86) PCT No.: **PCT/US2005/009333**(75) Inventors: **A. Paul Alivisatos**, Oakland, CA (US); **Yadong Yin**, Moreno Valley, CA (US); **Robert M. Rioux**, Somerville, MA (US); **Gabor A. Somorjai**, Berkeley, CA (US)

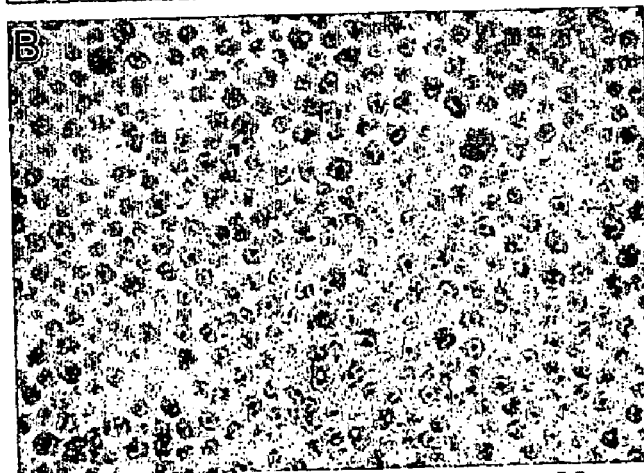
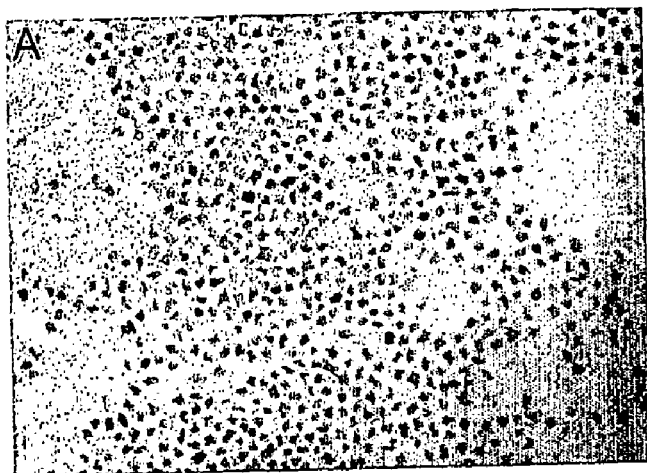
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**B05D 7/14** (2006.01)(52) **U.S. Cl.** ..... **428/570; 427/216**(57) **ABSTRACT****Correspondence Address:****LAWRENCE BERKELEY NATIONAL LABORATORY**  
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Described herein are nanoreactors having various shapes that can be produced by a simple chemical process. The nanoreactors described herein may have a shell as thin as 0.5 nm and outside diameters that can be controlled by the process of making and have a nanoparticle enclosed therein. The nanoreactors have catalytic activity and may be used to catalyze a variety of chemical reactions.

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— 50 nm